

IN THE CLAIMS

We claim:

1. A method comprising:

providing a first wafer;

forming a first raised contact from a first plug on said first wafer;

providing a second wafer;

forming a second raised contact from a second plug on said second wafer;

applying an anisotropic conductive adhesive over said first wafer;

aligning said second wafer to said first wafer;

attaching said second wafer to said anisotropic conductive adhesive to form a continuous and conductive path between said first raised contact and said second raised contact.

2. The method of claim 1 wherein said anisotropic conductive adhesive is applied as a paste.

3. The method of claim 1 wherein said anisotropic conductive adhesive is applied as a film.

4. The method of claim 1 wherein said anisotropic conductive adhesive comprises a binder and a filler.

5. The method of claim 4 wherein said binder comprises a thermoset.
6. The method of claim 4 wherein said filler comprises spherical conductive particles.
7. A method comprising:
 - providing a first wafer, said first wafer having a first raised contact;
 - forming an anisotropic conductive film over said first wafer, said anisotropic conductive film comprising a binder and a filler;
 - stacking a second wafer over said anisotropic conductive film, said second wafer having a second raised contact, said second raised contact facing said first raised contact; and
 - applying pressure and heat to cure said binder and to trap a portion of said filler between said first raised contact and said second raised contact, said portion becoming a continuous and conductive path.
8. The method of claim 7 wherein said first wafer and said second wafer are structurally similar.
9. The method of claim 7 wherein said first wafer and said second wafer are functionally similar.
10. The method of claim 7 wherein said binder serves as an underfill between said first wafer and said second wafer.

11. A structure comprising:

an anisotropic conductive film, said anisotropic conductive film comprising a front surface and a rear surface;
a first raised contact disposed over said front surface, said first raised contact forming part of a first wafer; and
a second raised contact disposed over said rear surface, said second raised contact forming part of a second wafer, wherein said second raised contact faces said first raised contact.

12. The structure of claim 11 wherein said anisotropic conductive film comprises certain particles that are trapped between said first raised contact and said second raised contact.

13. The structure of claim 12 wherein said particles that are trapped between said first raised contact and said second raised contact form a continuous and conductive path.

14. The structure of claim 12 wherein said anisotropic conductive film further comprises other particles that are not trapped between said first raised contact and said second raised contact.

15. The structure of claim 13 wherein said particles that are not trapped between said first raised contact and said second raised contact do not form a continuous and conductive path.